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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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02/02/2001

Peter Snawerdt

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12/19/2003

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EXAMINER

PHAN, HANH

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,438

Applicant(s)

SNAWERDT, PETER

Examiner

Hanh Phan

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 5, 6. 6) ☐ Other: _____

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DETAILED ACTION

1. In claim 5, the phrase "the card as recited in claim 5" should be changed to -- the card as recited in claim 4--.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature "a circuit having a delayed feedback exclusive-or gate" in claim 6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-8 and 12-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,469,816 (Snawerdt). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-8 and 12-14 of the instant application are encompassed by claims 1-20 of US Patent No. 6,469,816 (Snawerdt).

Regarding claims 1 and 12, Snawerdt (US Patent No. 6,469,816) discloses a card for transmitting data over at least one optical fiber, the card comprising:

a transmitter having at least one light source and a phase modulator for phase modulating light from the source so as to create phase-modulated optical signals in the light as a function of an input electronic data stream; and

a receiver having an interferometer for reading received optical signals (see claims 1 and 7 of Snawerdt).

Regarding claim 2, Snawerdt discloses wherein the at least one light is a laser (see claims 1 and 7 of Snawerdt).

Regarding claims 3 and 14, Snawerdt discloses further including an energy level detector (see claims 5, 20 and 8 of Snawerdt).

Regarding claim 4, Snawerdt discloses wherein the interferometer includes a delay loop fiber (see claims 1 and 7 of Snawerdt).

Regarding claim 5, Snawerdt discloses wherein the delay loop fiber has a securing device for securing the delay loop fiber to the card (see claims 1 and 7 of Snawerdt).

Regarding claim 6, Snawerdt discloses further including a circuit having a delayed feedback exclusive-or gate (see claim 16 of Snawerdt).

Regarding claim 7, Snawerdt discloses wherein the interferometer includes a splitter and a coupler (see claims 1 and 7 of Snawerdt).

Regarding claims 8 and 13, Snawerdt discloses wherein the card includes backplane made from a printed circuit board (see claims 1 and 7 of Snawerdt).

5. Claims 1-8 and 12-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of U.S. Patent No. 6,594,055 (Snawerdt). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-8 and 12-14 of the instant application are encompassed by claims 1-27 of US Patent No. 6,594,055 (Snawerdt).

Regarding claims 1 and 12, Snawerdt (US Patent No. 6,594,055) discloses a card for transmitting data over at least one optical fiber, the card comprising:

a transmitter having at least one light source and a phase modulator for phase modulating light from the source so as to create phase-modulated optical signals in the light as a function of an input electronic data stream; and

a receiver having an interferometer for reading received optical signals (see claims 1-15 of Snawerdt).

Regarding claim 2, Snawerdt discloses wherein the at least one light is a laser (see claims 1-5 of Snawerdt).

Regarding claims 3 and 14, Snawerdt discloses further including an energy level detector (see claims 1-15 of Snawerdt).

Regarding claim 4, Snawerdt discloses wherein the interferometer includes a delay loop fiber (see claims 1-15 of Snawerdt).

Regarding claim 5, Snawerdt discloses wherein the delay loop fiber has a securing device for securing the delay loop fiber to the card (see claims 1-15 of Snawerdt).

Regarding claim 6, Snawerdt discloses further including a circuit having a delayed feedback exclusive-or gate (see claims 1-15 of Snawerdt).

Regarding claim 7, Snawerdt discloses wherein the interferometer includes a splitter and a coupler (see claims 1-15 of Snawerdt).

Regarding claims 8 and 13, Snawerdt discloses wherein the card includes backplane made from a printed circuit board (see claims 1-15 of Snawerdt).

6. Claims 1-8 and 12-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,476,952 (Snawerdt). Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations recited in claims 1-8

and 12-14 of the instant application are encompassed by claims 1-14 of US Patent No. 6,476,952 (Snawerdt).

Regarding claims 1 and 12, Snawerdt (US Patent No. 6,594,055) discloses a card for transmitting data over at least one optical fiber, the card comprising:

a transmitter having at least one light source and a phase modulator for phase modulating light from the source so as to create phase-modulated optical signals in the light as a function of an input electronic data stream; and

a receiver having an interferometer for reading received optical signals (see claims 1-14 of Snawerdt).

Regarding claim 2, Snawerdt discloses wherein the at least one light is a laser (see claims 1-14 of Snawerdt).

Regarding claims 3 and 14, Snawerdt discloses further including an energy level detector (see claims 1-14 of Snawerdt).

Regarding claim 4, Snawerdt discloses wherein the interferometer includes a delay loop fiber (see claims 1-14 of Snawerdt).

Regarding claim 5, Snawerdt discloses wherein the delay loop fiber has a securing device for securing the delay loop fiber to the card (see claims 1-14 of Snawerdt).

Regarding claim 6, Snawerdt discloses further including a circuit having a delayed feedback exclusive-or gate (see claims 1-14 of Snawerdt).

Regarding claim 7, Snawerdt discloses wherein the interferometer includes a splitter and a coupler (see claims 1-14 of Snawerdt).

Regarding claims 8 and 13, Snawerdt discloses wherein the card includes backplane made from a printed circuit board (see claims 1-14 of Snawerdt).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2 and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuse et al (US Patent No. 6,335,8140) in view of Kimbrough et al (US Patent No. 6,362,908).

Regarding claims 1 and 12, referring to figure 5, Fuse discloses a device for transmitting data over at least one optical fiber, the device comprising:

a transmitter (i.e., optical transmitter PT, Fig. 5) having at least one light source (i.e., light source 201) and a phase modulator (203, 204) for phase modulating light from the source so as to create phase-modulated optical signals in the light as a function of an input electronic data stream; and

a receiver (i.e., optical receiver PR, Fig. 5) having an interferometer (i.e., interference portion 6, Fig. 5) for reading received optical signals (col. 22, lines 15-31).

Fuse differs from claims 1 and 12 in that he fails to teach the device is a card. However, Kimbrough teaches the device is card (Figs. 1, 2A and 4B, col. 6, lines 2-55, col. 7, lines 1-34, col. 10, lines 4-15, col. 11, lines 60-67 and col. 12, lines 1-38).

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Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the card as taught by Kimbrough in the system of Fuse. One of ordinary skill in the art would have been motivated to do this since Kimbrough suggests in column 6, lines 2-55, col. 7, lines 1-34, col. 10, lines 4-15, col. 11, lines 60-67 and col. 12, lines 1-38 that using such a card has advantage of allowing the all elements of device are located on a single card to save space, reduce size and weight and cost and to facilitate the insertion/removal of circuit cards into the system.

Regarding claim 2, Fuse further teaches discloses the light is a laser (col. 26, lines 46-58).

Regarding claim 4, Fuse further teaches wherein the interferometer (i.e., interference portion 6, Fig. 5) includes a delay loop fiber (i.e., optical delay portion 602).

Regarding claim 5, it would have been obvious to obtain the delay loop fiber has a securing device in order to secure the delay loop fiber and to fasten the fiber and obtain a desired delay.

Regarding claim 6, it would have been obvious to obtain a circuit having a delayed feedback exclusive-or gate in order to provide an output electronic data stream for controlling the phase modulator.

Regarding claim 7, Fuse further teaches the interferometer includes a splitter and a coupler (Fig. 5).

Regarding claims 8 and 13, the combination of Fuse and Kimbrough teaches the card includes backplane made from a printed circuit board (Figs. 2A and 4B of Kimbrough).

Regarding claim 9, the combination of Fuse and Kimbrough teaches the card includes a faceplate having a fiber tap signal device (Figs. 2A and 4B of Kimbrough).

Regarding claims 10 and 11, the combination of Fuse and Kimbrough teaches the card is a replacement part for an existing optical multiplexer (Fig. 4B of Kimbrough, col. 11, lines 60-67 and col. 12, lines 1-38).

9. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuse et al (US Patent No. 6,335,8140) in view of Kimbrough et al (US Patent No. 6,362,908) and further in view of Siegel (US Patent No. 4,998,295).

Regarding claims 3 and 14, Fuse as modified by Kimbrough teaches all the aspects of the claimed invention set forth in the rejection to claims 1 and 12 above except fails to teach an energy level detector. However, Siegel teaches an energy level detector (16)(Fig. 1, col. 1, lines 45-67 and col. 2, lines 1-60). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the energy level detector as taught by Siegel in the system of Fuse modified by Kimbrough. One of ordinary skill in the art would have been motivated to do this since Siegel suggests in column col. 1, lines 45-67 and col. 2, lines 1-60 that using such an energy level detector has advantage of allowing detecting and monitoring the signal.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Karstensen et al (US Patent No. 5,923,451) discloses means for connecting electronic devices for communication with one another.

Rollins (US Patent No. 6,201,632) discloses feed forward optical frequency/phase demodulator.

Ibe et al (US Patent No. 6,643,046) discloses apparatus and method for optical modulation.

Hakki et al (US Patent No. 6,549,311) discloses wave division multiplexing.

Bunn (US Patent No. 5,452,086) discloses interferometer amplitude modulation.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.



Hanh Phan

12/10/2003